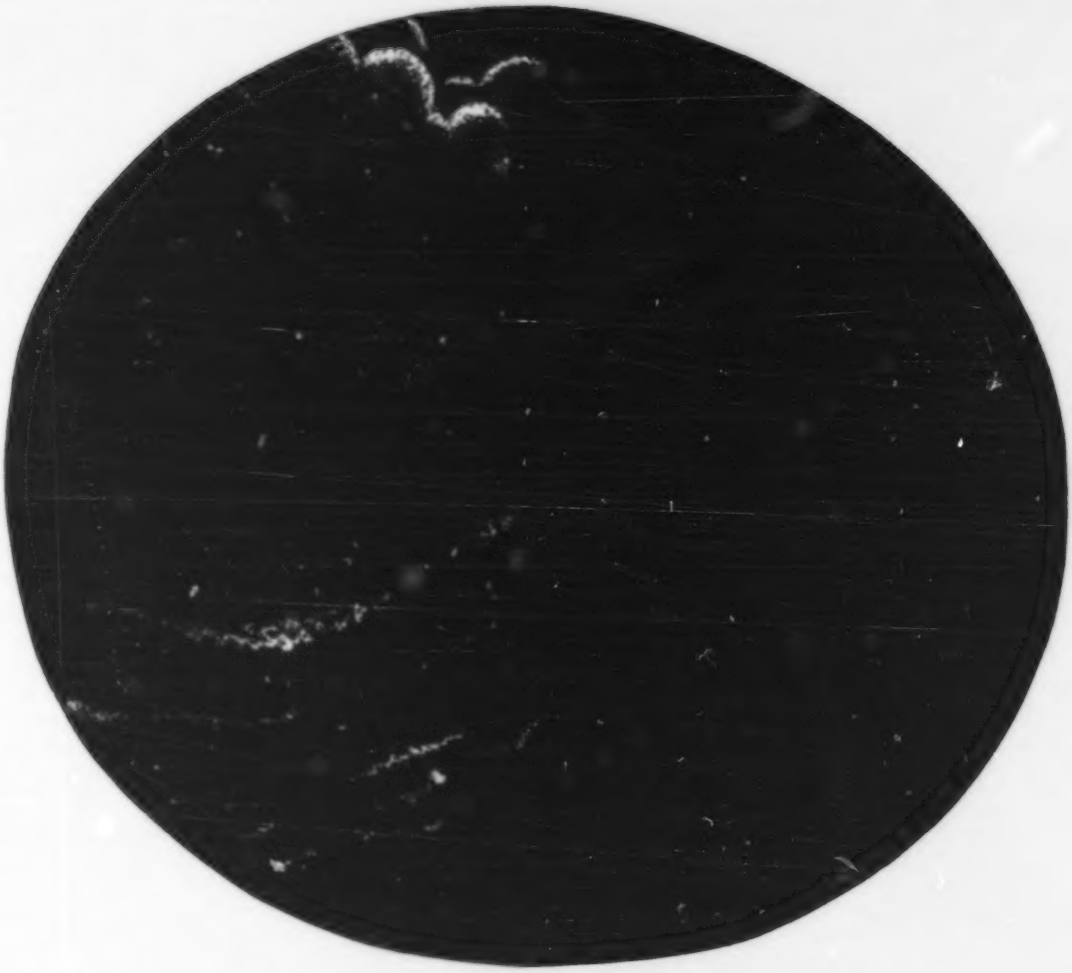
TOWARDS A LIVEABLE METROPOLIS



The Metropolitan Toronto Planning Department

TOWARDS A LIVEABLE METROPOLIS

A Discussion Paper in the Metropolitan Plan Review Series

The Metropolitan Planning Department
Metropolitan Plan Review Report No.13

Printed in Canada May 1991

General inquiries,
written submissions and
ordering requests
should be directed to:
Towards a Liveable Metropolis
Metropolitan Toronto Planning Department
Policy Development Division
11th Floor, East Tower, Toronto City Hall
Toronto, Ontario M5H 2N1
(416) 392 - 8101

92-01885/

CONTENTS

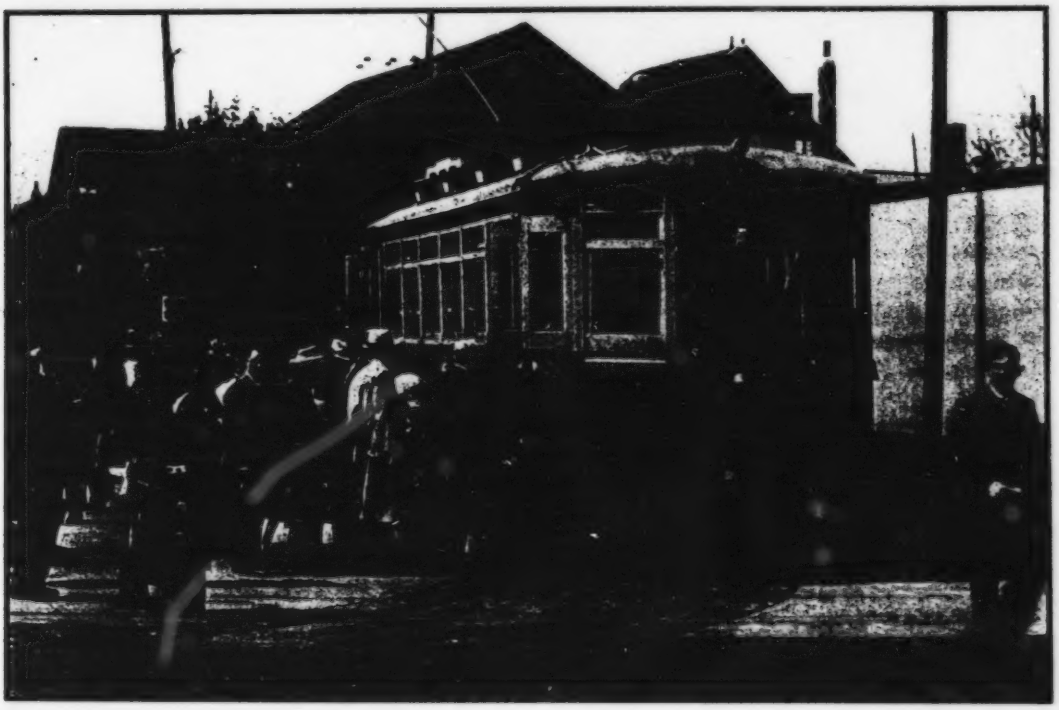
Chapter One	4	**INTRODUCTION**
	5	***Purpose of the Report***
	5	***The Issues***
	8	***Report Structure***
Chapter Two	9	**A NEW PHILOSOPHY: THE LIVEABLE METROPOLIS**
	9	***Concepts***
	10	*Sustainable Development*
	11	*Healthy Communities*
	12	*Ecosystem Approach*
	14	***A Liveable Metropolis***
	15	***New Directions***
Chapter Three	17	**RESPONDING TO THE ISSUES**
	18	***Federal Initiatives***
	18	***Provincial Initiatives***
	19	***Municipal Initiatives***
	19	***Metropolitan Initiatives***
	20	*The Metropolitan Official Plan*
	21	*Economic Development Strategy*
	21	*Social Development Strategy*
	21	*Environmental Initiatives*
	22	***The Metropolitan Challenge***
Chapter Four	24	**OPPORTUNITIES FOR CHANGE**
	25	***A Coordinated Strategy***
	25	*Changing Corporate Practices*
	27	*Measuring Change*
	27	**i) State of the Environment**
	28	**ii) Developing Indicators**
	28	**iii) Setting Targets**
	29	***Repairing the Damage***
	31	***Planning for Change***
	32	*Policy Directions*
	33	*The Development Review Process*
	36	**i) Environmental and Social Impact Evaluation**
	37	**ii) Performance Standards and Criteria**
	38	***A Stewardship Perspective***
Chapter Five	40	**CONCLUSION AND SUMMARY OF INITIATIVES**
Appendix	43	**SELECTED BIBLIOGRAPHY**

Chapter One

INTRODUCTION

Each generation is entitled to the interest on the natural capital, but the principal should be handed on unimpaired.

Canadian Commission on Conservation, 1915



It is only recently that the global environmental movement has gained enough attention to move environmental issues to the forefront as an area of concern in Canada and other nations. Throughout the world, in industrialized and developing countries, the focus has been on growth and productivity, with much less emphasis on environmental and social costs and benefits, and on standards of living rather than quality of life. The result has been a deterioration of the environment and steady increase in social costs, to an extent that threatens the quality of life to which Canadians are accustomed. The challenge is daunting, but the future liveability of the metropolis, and the planet, is dependent upon the reconciliation of economic, social and environmental imperatives.

Purpose of the Report

The purpose of this report is to provide a framework for the new Metropolitan Official Plan that reflects the values and aspirations of the citizens of Metropolitan Toronto for a liveable metropolis. Just as the "GTA: Concepts for the Future" discussion paper presented the goals and options for planning the growth of the geographic extent of the Greater Toronto Area, this report offers an alternative approach to managing growth and the use of public resources. As a discussion paper, it also presents ideas, suggestions and proposals concerning innovative ways of dealing with the issues currently confronting communities. The report also emphasizes what is needed to achieve a healthy environment, a component of liveability that has been under great strain.

The report draws from the conceptual frameworks of "environmentally sustainable economic development," "healthy communities" and the "ecosystem approach" to define principles for planning a liveable metropolis. It proposes an approach to planning which assumes that socio-economic and environmental impacts and outcomes are fundamentally related. In the past, urban policy-makers have struggled to keep pace with the issues inherent in rapid urban growth. Today, governments must work together in devising a long-term strategy to ensure a balance between environmental integrity, social well-being and economic vitality. The report delineates opportunities for change through a variety of mechanisms that move beyond remedial solutions to a new framework for decision-making, finally focusing on the planning process and the Metropolitan Official Plan.

While this report was prepared as part of the Metropolitan Plan Review Pro'ram, the issues addressed involve all aspects of the Metropolitan government and the directions proposed have implications for the entire Corporation.

The Issues

The issues are real and immediate. They pose a serious challenge to the future liveability of Metropolitan Toronto.

Pollution must be brought under control and mankind's population and consumption of resources must be steered towards a permanent and sustainable equilibrium.

E.F. Schumacher

On almost any given day, one can open the newspaper and find evidence of the human impact on the environment. Forty thousand trees are cut daily to supply Canada's newspapers, far more than the number of trees being replanted. The 227,800 cars that commute every rush hour in Metropolitan Toronto consume 387,260 litres of gasoline a day, a consumption rate twice that of large European cities and four times that of Tokyo. A myriad of similar statistics reveal the high levels of consumption citizens of Metropolitan Toronto often take for granted. We have become among the world's most inefficient users of energy and profligate consumers of natural resources. The fundamental cause of many of our urban environmental problems - air pollution, habitat destruction, water quality degradation, urban congestion - is the simple fact that for decades our society has stressed the benefits of material progress and economic growth without assessing the cost of our activities in terms of damage to the natural environment.

Prime agricultural land continues to be given over to urban uses while natural areas and

parkland have become increasingly scarce commodities within the pattern of land use. With the loss of natural habitats due to increasing proportions of paved surfaces, biological functions, such as the cleansing of CO_2 from the atmosphere, are disabled. In addition, social costs increase as natural areas and maintained parkland, which serve as sites for recreational and leisure pursuits, and aesthetic and psychological contrast to the built environment, are lost. In recent years, urban communities have become more aware of the penalties for inappropriate approaches to land clearance and allowing development to occur in areas such as the Oak Ridges Moraine, which functions as the recharge area for our groundwater supplies.

As the Greater Toronto Area (GTA) grows from a pre-war population of 1 million to a possible 6 million by 2021, it is experiencing the problems which are felt by most of the major metropolitan areas of the world, including the impending effects of global warming. Global warming, or the "Greenhouse Effect," is a potential threat to the ecological balance of our planet. Global warming poses significant geographic, demographic and political consequences for Metropolitan Toronto, traditionally a major recipient of foreign immigration.

The Greater Toronto Area (GTA) contributes to global warming and ground-level ozone through the extensive use of motor vehicles and coal-fired generating plants, which provide 25% of Ontario's electrical supply. Vehicle emissions within Metropolitan Toronto contribute 10 million tonnes of CO_2 to the atmosphere annually. Over the next 15 years, tailpipe emissions are projected to rise by 25% as a result of increased automobile ownership and use. Canadians are among the highest fossil fuel users per capita in the world, emitting an average of 4.1 tonnes of carbon per person per year. (Special Advisory Committee on the Environment, 1989)

Even though government intervention has been effective in reducing the overall levels of sulphur dioxide and lead in the atmosphere, many areas of concern remain. For example, while technological improvements have reduced automobile exhaust pollutants, increased use of automobiles has more than offset these gains. Currently, 64% of GTA commuters drive cars to work or to school. By contrast only 25% use public transit and only 10% walk or ride a bicycle.

While many of Metropolitan Toronto's air pollution problems, such as acid rain, volatile organic compounds in ground-level ozone, and toxic organic compounds come from distant sources, most of the sulphur dioxide, nitrogen oxide, carbon monoxide, lead and suspended particulate that pollute the air is generated locally.

Every day, Metropolitan Toronto sends 8,905 tonnes of garbage to landfill sites. Metropolitan residents dispose of an average of 1.7 kilograms of solid waste every day, 620.5 kilograms every year. This compares unfavourably to the American daily average of 1.6 kilograms (584 kilograms annually) and the Japanese daily average of 0.9 kilograms (339 kilograms annually). (Recycling Council of Ontario, 1990).

Also, there is increasing incidence of contaminated soil being discovered. This represents an unacceptable danger, especially to children whose activity brings them in frequent contact with the ground where exposure to the contamination is likely. These toxic levels make some areas unfit for habitation without significant remediation.

Metropolitan Toronto operates four water filtration plants which provide approximately 311 million gallons of water per day, of which 280 million gallons per day is used by the Metropolitan Toronto population. The quality of water, especially near-shore water, however, is

another major issue for the region. The International Joint Commission on the Great Lakes has declared the Toronto waterfront as one of 42 sites most in need of remedial action. Metropolitan Toronto also operates four sewage treatment plants which process more than 300 million gallons of waste water a day. Despite this treatment, when heavy rains occur, contaminated water still escapes into the environment through storm sewers and where combined sewers exist. Moreover, the sewage treatment facilities are not designed to treat some kinds of waste, including much of the 35 litres of toxic waste discarded annually by every Metropolitan household. Symptomatic of the contamination problem as it affects Lake Ontario, the provincial government advises restrictions on eating game fish from local waters and beach closures have become a norm.

Population growth, demographic trends and lifestyle preference all influence the shape and character of the urban environment. Like many large urban areas in North America, Metropolitan Toronto has expanded through the dependence upon the private automobile and preference for single-family, low-density housing. The social consequences evident today include traffic congestion, less amendable conditions for pedestrians, a shortage of affordable housing, an increasing incidence of environmentally related health issues and growing concern for security and safety.

Global economic issues are gaining prominence on the public agenda as policy-makers realize how important these economic factors are to global environment issues. Over the past decade, the industrialized world has witnessed major changes in trade structures, from the reduction of trade barriers to the expansion of powerful trading blocs and the creation of resistant non-tariff barriers. Economic growth has been influenced by the parallel growth of scientific and technical knowledge. Unfortunately this has also quickened the pace of environmental degradation and social pressures.

Metropolitan Toronto's recent economic development has been strongly influenced by this international "post-industrial" economy. The displacement of the labour-intensive, manufacturing-based economy with a capital-intensive, service-oriented economy has been the harbinger of significant social change throughout the GTA. High costs and social-demographic change has encouraged traditional industry to relocate to suburban areas. Service-related and part-time work is supplanting more traditional labour-intensive, manufacturing employment. As a growing proportion of the labour force resides in the regions surrounding Metropolitan Toronto, substantial increases in commuter traffic can be expected along with the deterioration of the environment caused by urban sprawl.

These economic trends have exerted social pressures. Extensive retraining of people in "sunset" industries is required; but many of the service sector jobs that have replaced traditional industrial employment cannot compare in terms of the income and benefits. Two-income families have become the norm rather than the exception. There are fewer opportunities for meaningful employment to those without secondary education or for youth, and concerns are growing that Metropolitan Toronto's service-oriented economy is widening the gap between higher and lower income groups.

The issues are both numerous and complicated; their consequences combine to increase pressures on the quality of life within Metropolitan Toronto and the surrounding region, and to reduce the liveability of the area. The complexity of the issues stresses the need to develop long-term strategies which address the dynamic interactions between the natural and built environments, and which recognize their mutual dependency.

Report Structure

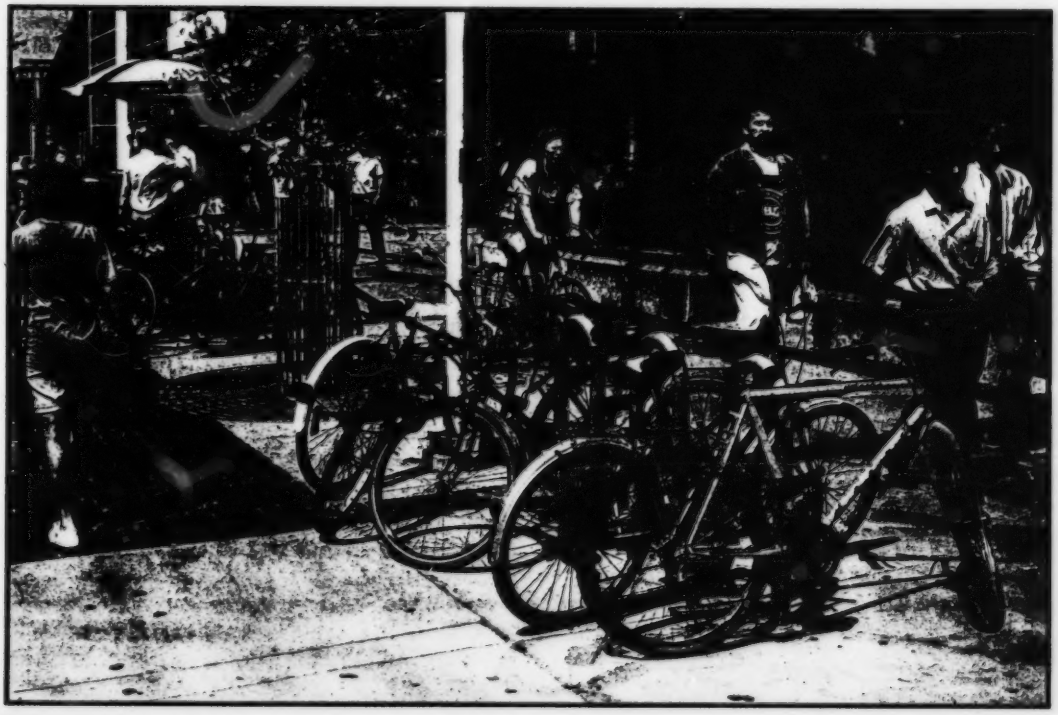
There is little disagreement about the importance of environmental, economic and social considerations to the liveability of the metropolis. Problems arise, however, with the manner in which these concerns are integrated into planning and decision-making processes. Chapter 2 provides a synthesis of the emerging philosophies for planning and managing a large metropolis and develops the concept of liveability. It provides a context for the theme of this report: that Metropolitan Toronto has a pivotal role in shaping the metropolis and enhancing liveability. Chapter 3 presents an overview of current Canadian initiatives and environmental priorities and outlines Metropolitan responses to the issues. Chapter 4 proposes initiatives for the municipality to undertake, setting out areas where Metropolitan Toronto can effectively influence environmental integrity, social well-being and economic vitality, thus enhancing the quality of urban life in this metropolis. The report then goes on to discuss policy directions and the planning framework that will be required. Finally, a stewardship perspective is advanced, recognizing the importance of collaborative action and heightened public awareness.

Chapter Two

A NEW PHILOSOPHY: THE LIVEABLE METROPOLIS

...if you change the way you make decisions,
you will probably change the decisions you make.

INCO Background: Sustainable Development-Everyone's Future.



The imbalace between measures of economic growth and productivity, and the environmental and social consequences of this development have resulted in a deterioration of the urban environment and unforeseen social impacts.

If the complex problems faced by Metropolitan Toronto are to be resolved, a more comprehensive approach to planning and resulting programs is required: one that encompasses not only the economy and land development but also the interrelationships between economic development, land use, and the natural and social environments. A framework based on a new philosophy for managing growth is needed if the emerging values of society are to be translated into effective government action.

Concepts

Recently, three conceptual frameworks have emerged which attempt to integrate thinking

about human, economic and social development and their impact on the natural environment. "Environmentally Sustainable Economic Development" is a response to concerns about the ability of the natural environment to continue to support human life while at the same time meeting society's increasing demands for raw materials and an ever increasing standard of living. (For the purposes of this report environmentally sustainable economic development will be referred to as sustainable development). The "Healthy Communities Movement" views human health in relation to the total urban environment, recognizing the influences of urban planning and community development on the "health" or well-being of individuals. The "ecosystem approach" provides a holistic or systemic model for planning and decision-making, focusing on the dynamic interrelationships between all elements of the urban community, as well as fostering an appreciation of natural processes. Integral to this approach is the view that humans are a part of, rather than apart from, the ecosystem.

Sustainable Development

The origins of the sustainable development concept can be traced back several decades to the growing concern for the effects of human activities on land, air, water and wildlife. This concern gave birth to the "environmental movement," which gained public and political recognition in North America with the publication of Rachel Carson's Silent Spring in 1962. The 1972 United Nations Conference on the Human Environment in Stockholm promoted the concept of "ecodevelopment" and declared that "the capacity of the earth to produce vital renewable resources must be maintained and, wherever practicable, restored or improved."

The Stockholm Conference, together with the publication of Limits to Growth by the Club of Rome, stimulated a global debate on development and the environment. This led to the concept of a "conserver society," advanced most prominently in Canada by the Science Council's 1977 report, Canada as a Conserver Society. The report urged that "Canadians as individuals, and their governments, institutions and industries must begin the transition from a consumer society preoccupied with resource exploitation to a conserver society engaged in more constructive endeavours."

In 1980, the International Union for the Conservation of Nature and Natural Resources (IUCN) released its World Conservation Strategy, which argued that sustainability could not be achieved through technical means. Although it did not actually employ the term, the Strategy explicitly recognized that demographic and economic growth were inevitable, and that a reconciliation had to be found between growth and the imperative of protecting the environment and conserving global resources. This represented a significant breakthrough by moving away from the assumption that development and the environment were inherently incompatible.

In 1987, the World Commission on Environment and Development, commonly referred to as the Brundtland Commission, published its report, Our Common Future. The report identified economic and environmental concerns common to all humanity and emphasized the linkages connecting human activity to the current global environmental crisis. The central theme of the Commission was to achieve a sustainable level of development, defined as:

> *"Development that meets the needs of the present without compromising the ability of future generations to meet their own needs."*
>
> (Brundtland Commission, 1987)

The Brundtland Commission viewed sustainable development as a process of change that

harmonizes the use of resources, the direction of investments, the orientation of technological development and the nature of institutional change. The report identified the following as critical policy objectives: changing the quality of growth, meeting essential needs, enhancing the resource base, reorienting technology, and merging environmental and economic decision-making.

While the Brundtland definition of sustainable development has been widely used, critics claim that the definition promotes a traditional, materialistic and exploitative relationship that supports the domination of nature by humankind. One school of thought applies the concept of sustainable development only to the principle of keeping economic and natural activity in balance with the "carrying capacity" of resources and the environment, though usually recognizing that this principle has social and ethical implications. Another school of thought argues that the meaning of sustainable development itself embraces a wide range of human, social and even spiritual values. This more encompassing interpretation led to the following definition of sustainable development which recognizes the necessity of social and political change:

"Sustainable development is positive socio-economic change that does not undermine the ecological and social systems upon which communities and society are dependent."

(Rees, University of British Columbia Centre for Human Settlement, May 1989)

This definition is predicated on the belief that successful implementation requires integrated policy, planning, and social learning processes and that political viability depends on the full support of the people affected through their governments, their social institutions, and their private activities.

Healthy Communities

The healthy communities concept traces its origin to the public health movement of the 19th century, which achieved great strides in public health.

The connection between urban conditions and public health was clearly recognized in the work of Canada's Commission on Conservation in the early years of this century, but thereafter the idea of public health protection was overshadowed by medical advances until 1972, when A New Perspective on the Health of Canadians was published by the Department of National Health and Welfare. This report argued that the most effective way to improve the health of Canadians was by changing the environment and changing behaviour, rather than solely through advances in medicine. It influenced development of the World Health Organization (WHO) position, which was adopted in 1977, that health was dependent at least as much on actions taken outside the health care system as within it; that community involvement in changing the conditions that led to health or illness was critical, and that medical technology should be used appropriately.

Recognition that personal health is closely linked to the community and the environment was later reflected in the 1986 Canadian government report, Achieving Health for All: A Framework for Health Promotion. It addressed such issues as creating healthy environments and coordinating healthy public policy. These ideas were reflected in the Ottawa Charter for Health Promotion which identified "ecological stability and resource sustainability" as prerequisites for health. Out of this evolution in thinking about human health emerged the "healthy communities movement."

The World Health Organization (WHO) defines health as:

".....a state of complete physical, mental, social well-being; not just the absence of disease or disability. It is a resource for everyday life which enables an individual and group to identify and to realize aspirations, to satisfy needs and to change or cope with the environment."

(WHO, 1987)

Based upon this concept of individual health, the WHO identifies a healthy city as one that:

".....is continually expanding and improving those physical and social environments and expanding those community resources which enable people to mutually support each other in performing all the functions of life and in developing to their maximum potential."

(WHO, 1987)

Central to the concept of a healthy community is the belief that health is a right and society has a responsibility to ensure conditions which promote health for all. Advocates of this concept argue that a community approach to enhancing health is more effective and more equitable than an approach that focuses solely on the individual. In short, health results from a preventative environmental and social development strategy, not solely from an illness care system. To achieve a healthy community, therefore, requires an urban environment that satisfies more than basic human needs.

The Ecosystem Approach

The concept of taking an ecosystem approach to planning and decision-making has recently become common parlance. While the widespread use of this term and its local prominence owes much to the recent work of the Royal Commission on the Future of the Toronto Waterfront, the ecosystem approach is not a new concept. The Great Lakes Water Quality Agreement, signed in 1978, represents one of the earliest Canadian attempts to implement an ecosystem approach, and more recently, the Rawson Academy proposed an Ecosystem Charter to govern the behaviour of all Great Lakes communities, as illustrated on the next page.

Rooted in the biological and ecological sciences, the ecosystem concept is a holistic, encompassing approach which emphasizes the dynamic interactions within a system, moving beyond the narrow definition of "natural environment." It is this emphasis which makes the ecosystem approach a valuable tool for planning and managing the metropolis.

To take an ecosystem approach to planning and decision-making, therefore, requires recognition of the interactions between all elements of the urban community and an understanding of their mutual dependencies. The urban ecosystem includes air, land, water, a diversity of plant, animal, marine and insect life, people, and the

full range of their economic and social activities, and therefore can best be understood as a complex chain of interactions. Humans are dependent on the health of the ecosystem, just as the integrity of the ecosystem is increasingly dependent upon humans. By contrast, the concept of "environment" emphasizes structures and components rather than interactions. The natural environment surrounds but is separate from us. Ecosystems, however, are dynamic, interconnected networks of which humans are an integral component. In order to survive, people need a stable climate, adequate clean air and water, productive soils and an ecosystem which is productive, stable and supports a diversity of life.

Any activity exacts stress on the natural parts of the ecosystem, to which the natural system responds; when stress is intense it eventually cripples the natural processes. Clearly the warning signals are here, and it is obvious that human activities need to harmonize with the other parts of the ecosystem. Compatibility must be achieved between economic and social activities and the environment on which these activities depend.

Although sustainable development, healthy communities and the ecosystem approach are products of differing intellectual heritages, each recognizes the importance of a healthy environment, sustaining communities and maintaining green space, and emphasizes the relationship between the natural and built environment and the quality of urban life. Each acknowledges the importance of resource management for the future. Clearly these concepts share many common goals. Like all models, each of these concepts has its own built-in biases. However much can be drawn from them and tailored to the Metropolitan context. Clearly, there is a need for an organizing concept for planning and managing the metropolis which combines multiple ends, multiple means and multiple

ECOSYSTEM CHARTER

1. **To promote all measures and behaviours necessary to achieve and maintain local, basin-wide and global environments free from toxic and other degradations to the health, well-being, and enjoyment of all people and other living things, now and in the future;**

2. **To use and conserve the environment and natural resources of the Great Lakes Basin ecosystem in ways that meet our various needs individually, collectively and corporately, without compromising the ability of future generations to meet their needs;**

3. **To accelerate the healing of damaged ecosystem components by restoring, rehabilitating, and protecting: (i) the ecological processes of the Great Lakes Basin ecosystem; (ii) its natural communities; and (iii) its populations of indigenous species of plants and animals;**

4. **To accept responsibility for: (i) maintaining the ecological processes and components of the Great Lakes Basin ecosystem; (ii) preserving biological diversity; and (iii) following the principle of sustainable use of ecosystem resources;**

5. **To promote the right of all interested to be informed and the responsibility to learn in a timely manner of: (i) current conditions in the Great Lakes Basin ecosystem; (ii) any planned activity that might significantly affect the environment (including policy, enacting legislation and implementation), and (iii) equal access and due process in administrative and judicial proceedings;**

6. **To cooperate in good faith with others living within the Great Lakes Basin ecosystem in implementing these obligations, and to cooperate with other people in other bio-geographic regions to achieve mutual objectives consistent with the above.**

Rawson Academy

participants with diverse interests, and which provides an active goal-directed framework for relating environmental integrity to the achievement of fundamental socio-economic goals. The characteristics of such a framework include:

1. explicit consideration and balanced accommodation of the economic, social and environmental concerns which permeate urban issues;
2. an informed and integrated process of decision-making; and,
3. institutional arrangements which promote collaboration and cooperation among key agencies and interests.

The Liveable Metropolis

The concept of liveability reflects an emphasis on quality of life within the context of a large and mature urban setting. Quality of urban life can be viewed in a number of ways: in the ability of individuals and communities to meet their needs, the functional integrity of natural systems, and the equality of opportunity to access resources, to pursue community, cultural and lifestyle options, and to continue meaningful traditions. The promotion of these differing aspects of the urban community in balance are reflected in a "liveable metropolis."

Liveability is characterized by the following interacting components:

Environmental Integrity: clean air, soil and water, and a variety of species and habitats maintained through practices that ensure sustainability over the long-term. The manner in which natural resources are used and the impact of individual, corporate and societal actions on the natural processes directly influences the quality of urban life.

Economic Vitality: a broadly based, competitive economy responsive to changing circumstances and able to attract new investment so that opportunities for employment and investment will be available in both the short and long-term.

Social Well-Being: safety and health as well as equitable access to housing, regional, community, and neighbourhood services, and recreational and cultural activities. The ability to participate in the decision-making processes of the community is integral to building strong cohesive communities.

Environmental integrity, social well-being and economic vitality together portray a dynamic system of relationships. To plan and manage the metropolis, therefore, decision-making and resulting actions must address the interrelationships and focus on the question of balance. Further, to accommodate changing circumstances and emerging issues, systems for planning and managing the metropolis must allow for flexibility. If policies and decisions are to be effective they must also be attuned to future needs, taking into consideration the fragile nature of the environment and the finite supply of many resources.

An informed and integrated decision-making process is thus necessary to achieve a liveable metropolis. No one dimension should be consistently promoted at the expense of others

or overall liveability is impaired. It makes no sense, for example, to consider economic enhancement initiatives which result in a degraded environment and risks to human health. Conversely, environmental initiatives which jeopardize the quality of urban life must be questioned. Just as the image of the liveable metropolis includes clusters of strong, cohesive communities, it also reflects a variety of productive natural habitats. It is a question of balance.

Adopting a multi-dimensional approach means reconciling complex quantities of information and interrelated issues with pragmatic approaches to management and operations. Ultimately, the character of the metropolis will be a reflection of the values and priorities of the community. Since there is neither the time, the money, nor the resources to do everything, trade-offs are inevitable. How priorities are set, what is and is not funded, and how diverse needs are balanced affects the liveability of the community. The best a community can do is make decisions and choices based on a collective vision and guided by shared principles, with the knowledge and resources currently available.

It is therefore critical that principles be articulated and entrenched in the decision-making process which will guide the development of the urban community towards a liveable metropolis well into the 21st century. The following principles are the cornerstones of the proposed new Framework for Decision-Making:

Equity: Underlying the image of the liveable metropolis is the principle of equity. Equity refers to both equality of access to services, facilities and opportunities today, and the preservation of resources for future residents. This means that the use of resources is planned and managed with the objective of ensuring an equitable distribution of resources and conserving the resource base for future use.

Sustainability: Human behaviour and activities combine to support a physical environment in which the land, water and air are of a quality and quantity to support attractive and healthy self-sustaining communities, including biological co-munities characterized by a variety of habitats, a diversity of species and balanced ecological systems.

Shared Responsibility: A recognition of individual and shared responsibility of all individuals, corporations and governments as managers of community resources and as stewards of the natural environment is fundamental to the liveable metropodis.

Meaningful community participation in the decision-making process is essential if the biophysical and human potential of the urban environment is to be realized. Citizens must be able to participate effectively in the decisions which affect them and their community.

Choice and Diversity: The presence of choice and diversity is integral to the liveable metropolis. Options in lifestyle, services and facilities, housing and neighbourhoods, employment, social and cultural opportunities must be available, and cultural and community expression fostered. The metropolis is enriched by the diversity of ethnic, cultural and religious backgrounds.

New Directions

The realization of a liveable metropolis requires an integrated decision-making framework and a fundamental shift in traditional perspectives. There needs to be a change in focus and behaviour from curative measures such as pollution reduction and remediation to those based on anticipation and prevention, from consumption to conservation, and from managing the

environment to managing demands on the environment. Further, there needs to be a change in focus from simply accounting for the immediate financial costs within defined political boundaries to a full cost accounting system for both current and future residents of the region and including ubiquitous resources such as air and water.

The concept of liveability is based on the recognition that the quality of urban life is dependent on the achievement of a balance between social well-being, environmental integrity and economic vitality. This requires a framework for decision-making which recognizes the importance of the dynamic relationship between the components of the liveable metropolis and establishes the parameters for decisions and the distribution of limited resources.

The next chapter provides an overview of current initiatives, setting a context for chapter 4 where Metropolitan strategies are proposed for translating the concept of liveability and a new decision-making framework into specific policies, programs and actions.

Chapter Three

RESPONDING TO THE ISSUES

It is in our cities and towns that issues surrounding the quality of life and composition of future development will receive much attention.... In order to lower the environmental pressures related to high energy and material use intensities, while ensuring the health and prosperity of our citizens, we will need to consider what activities we undertake and how we undertake them. We also need to examine our values and how we define and measure progress and success...

Ontario Round Table on Environment and Economy, 1990

An understanding of the importance of the issues discussed in Chapter 1 and the need for new approaches to achieve lasting solutions has emerged. Responsibility for solutions is shared among a variety of jurisdictions, and for the most part actions cannot be effective if limited by political boundaries or sectoral mandates. It is time to more aggressively pursue cooperative strategies. This chapter presents an overview of current Canadian initiatives, environmental priorities, and strategies for change and remediation. These initiatives illustrate the growing awareness of the need to integrate environmental and social considerations into the decision-making process and of the need for collaboration, cooperation, and coordination.

Federal Initiatives

The Government of Canada has undertaken a number of initiatives regarding national environmental issues, many of which directly affect Metropolitan Toronto. In response to the Brundtland Report, the federal government created the **National Task Force on the Environment and Economy** advocating "sustainable economic growth" and citing its main objective as promoting "environmentally sound economic growth and development, not to promote either economic growth or environmental protection in isolation."(Report of the National Task Force on Environment and Economy, 1987) **The National Round Table on the Environment and Economy** (NTREE) was created to "act as a catalyst in the integration of sustainable development principles into long-term planning and day-to-day operations (of government)." (NTREE, 1989) Its function is to provide advice and information relative to sustainable development, to "forge new ideas and partnerships to address the important link between the environment and the economy," and help to build a consensus on measures to effect change. The deliberations of these two organizations have contributed to the recently released federal **Green Plan**. The intent of the Green Plan is to move Canada towards sustainable development, and by the year 2000, "make Canada the industrial world's most environmentally friendly country."

An early federal initiative endorsing an ecosystem view of the environment was the joint **Canada-United States Great Lakes Water Quality Agreement**. The Agreement, drafted and monitored by the International Joint Commission, aims "to restore and maintain the chemical, physical and biological integrity of the Great Lakes Basin Ecosystem." The Agreement commits both federal governments to abatement programs and water quality objectives and calls for cooperation in such measures among the many Great Lakes jurisdictions.

One of the most promising federal initiatives from a Metropolitan perspective has been the **Royal Commission on the Future of the Toronto Waterfront**. In September of 1990, the Royal Commission (which is the second Royal Commission in the history of Canada to have both a federal and provincial mandate) issued its second interim report, Watershed. As the title of the report suggests, the Royal Commission made far-reaching recommendations for the future of the regional watershed and the ecosystem as a whole, considering a broad range of interrelated environmental and development issues. The Commission and the reports it has published have been very effective at identifying and bringing focus to the issues, raising public awareness and identifying some good directions for finding solutions. Although the substance of the report is not new, the process, which has been publicly accessible and scrupulously involved all levels of government, will hopefully produce significant results. It is now up to the various levels of government to devise collaborative ways to implement solutions and effect change.

Provincial Initiatives

Some important initiatives have also been undertaken by the Government of Ontario, with wide jurisdictional responsibilities in environmental and development issues within the Greater Toronto Area. Similar in purpose and structure to the National Round Table, the mandate of the **Ontario Round Table on Environment and Economy** is "to establish a framework and provide guidance and coordination for the development of a provincial Sustainable Development Strategy." A more region-specific initiative of the provincial government is the **Greater Toronto Area**

Greenlands Strategy. This study identified areas to be included in a future regional greenlands system for the GTA, examined methods to secure greenlands and suggested possible institutional arrangements to implement such strategies.

When the International Joint Commission listed the Metropolitan Toronto waterfront as one of its 43 Areas of Concern, the Province, in cooperation with the other levels of government, relevant agencies and individuals, responded by initiating the development of the **Metropolitan Toronto Remedial Action Plan** (MTRAP). The MTRAP process has defined the polluted area, identified the sources of pollution, established goals, developed remedial options, and will coordinate the implementation and monitoring of the results once the plan has been adopted.

The **Municipal-Industrial Strategy for Abatement** (MISA) is a remedial initiative which complements the MTRAP program. MISA is aimed at controlling municipal and industrial contaminant discharges into surface waters by requiring the use of the best available pollution abatement technology standards.

In addition, the Provincial government is involved in such policy areas as the coordination and integration of the Planning and Environmental Assessment Acts. Because most provincial initiatives require physical, capital and operating programs to be undertaken by regional and local municipalities, difficulties are often experienced with timely implementation. This often stems from a lack of understanding of the local context and the competing demands on a limited and fairly inflexible tax base, and underlines the need for cooperative strategies to bridge the gap between policy and implementation. Several of the most recent provincial initiatives have attempted to address the problem by tying provincial policy initiatives to cooperative implementation strategies which involve the regional and local jurisdictions.

Municipal Initiatives

The Metropolitan area municipalities of Etobicoke, Scarborough and North York have established **Environmental Committees** to provide advice to their respective city councils on environmental policies, programs and the environmental implications of development proposals. The City of Toronto, as a leading proponent of the healthy city concept, has drawn up the **Healthy Toronto 2000 Strategy** with over 80 specific recommendations aimed at improving the quality of life in the city, coordinated through the Healthy City Office. Toronto has also established the **Environmental Protection Office** and created the Special Advisory Committee on the Environment. The **Toronto Waterfront Remedial Action Plan** (WRAP), a precursor to the Metropolitan Toronto Remedial Action Plan, identified sources of water quality contamination along the Toronto waterfront and prescribed recommendations and targets for remedial action.

Metropolitan Initiatives

The Municipality of Metropolitan Toronto has developed the **Corporate Strategic Plan** which will help to anticipate change and provide a clear perspective on corporate goals and priorities for the coming years. The Strategic Plan establishes a framework of principles, priorities, goals, objectives and targets which will be articulated and implemented through Metropolitan programs. The plan addresses the need to integrate environmental and social concerns into all decision-making and outlines ways of encouraging significant public involvement and participation in the decision-making process. The Corporate Strategic Plan will provide a coordinating framework for the numerous individual initiatives of the Corporation, such as the **Official**

Plan, the **Economic Development Strategy** and the **Social Development Strategy.**

The Metropolitan Official Plan

Metropolitan Toronto is currently in the process of developing a new Official Plan. Throughout the Metropolitan Plan Review Program two fundamental issues have consistently arisen: the impact of redevelopment on the quality of life in Metropolitan Toronto, and the influences of the dramatic growth of the regions surrounding Metropolitan Toronto.

The Municipality of Metropolitan Toronto has important planning responsibilities both directly in the Metropolitan area, and indirectly within the entire urbanized area. It is responsible for providing an overall framework to meet the needs and aspirations of the Metropolitan community. Key jurisdictional responsibilities include the provision of the regional physical and social infrastructure, such as transit, roads, piped services, housing and community services. To effectively provide these services, Metropolitan Toronto needs a planning framework which clearly sets out its corporate intentions, and mechanisms, both internal and external, for coordinating the delivery of services. The Metropolitan Official Plan can be such a vehicle.

The current Metropolitan Official Plan, approved in 1980, contains planning goals to ensure that the Metropolitan area has sufficient residential dwelling units and an effective economic base to accommodate future residential and economic growth. The Metropolitan Official Plan recognizes the importance of natural resources and has policies in place to conserve, protect and enhance the natural environment. More specifically, the Metropolitan Official Plan designates environmental management objectives and policies for the river valleys and the waterfront, energy conservation, water supply,

QUALITIES OF A HEALTHY CITY

A City should provide:

- **a clean, safe physical environment of high quality (including housing quality);**
- **an ecosystem that is stable now and sustainable in the long term;**
- **a strong, mutually supportive and non-exploitive community;**
- **a high degree of participation and control by the public over the decisions affecting their lives, health and well-being;**
- **the meeting of basic needs (for food, water, shelter, income, safety and work) for all the city's people;**
- **access to a wide variety of experiences and resources, with the chance for a wide variety of contact, interaction and communication;**
- **a diverse, vital and innovative city economy;**
- **the encouragement of connectedness with the past, with the cultural and biological heritage of city dwellers and with other groups and individuals;**
- **a form that is compatible with and enhances the preceding characteristics;**
- **an optimum level of appropriate public health and sick care services accessible to all; and,**
- **a high health status (high levels of positive health and low levels of disease).**

The Healthy City Project, City of Toronto

pollution control and refuse disposal. Unfortunately, the imprecise wording of several policies impedes their meaningful impact on the development review or capital budgeting processes, and has limited affect on the overall operating program of the Corporation.

Submissions to the Metropolitan Plan Review Program have emphasized that the current Official Plan lacks a conceptual basis. If Metropolitan Toronto is to apply the concept of liveability, substantive changes in the form and content of the Official Plan are required. A discussion of what is being proposed for inclusion in the new Metropolitan Official Plan comprises Chapter 4 of this report.

In addition to the Plan Review Program, the Municipality is currently undertaking some major initiatives with important consequences to the urban environment. In March of 1990, Council approved a program for the development of a new Metropolitan Waterfront Plan. The development of this Plan represents an initial attempt to operationalize the concepts outlined in this report in a pragmatic way.

Economic Development Strategy

Technological advances and global economic restructuring have contributed to significant change in the regional economy. In response, Council has adopted the Metropolitan Toronto Economic Development Strategy. The Strategy identifies a number of factors which will impact on the economy of the Metropolitan area. It emphasizes the need for change in the way Metropolitan Toronto responds to technological advances and economic restructuring if the Metropolitan area is to remain successful and build on its strong economic base. The Strategy promotes a move to higher value-added, higher-paying employment activities, suggesting the development of several indigenous world-scale companies, increased research and development, and the attraction of high-paying headquarters jobs.

Social Development Strategy

In the past, Metropolitan Toronto has responded to social needs on a programmatic basis, but the need for a broad social vision for the Metropolitan area has become increasingly evident. Recognizing this need, Council has directed the development of a Social Development Strategy and implementation plan for Metropolitan Toronto, envisioned as an overall plan for future service and community development. The Strategy will seek to improve service coordination and linkage, and to rationalize the provision of social and community services in Metropolitan Toronto. It will establish a set of clearly articulated goals and objectives.

While the Social Development Strategy will not be included verbatim in the Metropolitan Official Plan, there will be consistency between the Official Plan policy directions and those contained in the Social Development Strategy. Recognizing that community services require land, piped services and transportation, while at the same time that land use patterns directly influence the demand for, and quality of, particular community services, better mechanisms for coordinating planning for the physical and social infrastructures are warranted and will be proposed.

Environmental Initiatives

Metropolitan Toronto is also involved in some major initiatives aimed at protecting and enhancing the natural environment. The recent initiative to improve the trunk sanitary sewer system represents a significant opportunity to remediate some of the problems caused by combined storm and sanitary sewer overflows. Additional capacity built into the sanitary sewer

system will assist in handling discharges from combined sewers and also will relieve the impacts of storm water surcharges.

The **Solid Waste Interim Steering Committee** (SWISC) is concerned with the development of a comprehensive long-term solid waste management system in the Greater Toronto Area, one that will be environmentally, economically and socially viable. While the provincial Ministry of the Environment has recently assumed responsibility for locating a suitable new landfill site for the municipality, Metropolitan Toronto is responsible for the **Solid Waste Environmental Assessment Plan** (SWEAP), a 20 to 40-year Master Plan for the management and disposal of industrial, commercial and residential solid waste.

Other environmental initiatives involving the Municipality include the **Metropolitan Toronto Remedial Action Plan** (MTRAP), coordinated by the provincial government, as previously described. Metropolitan Toronto has initiated the **Water Quality Improvement Coordinating Committee** (WQICC), an interjurisdictional committee with the mandate to coordinate the implementation of programs to improve Metropolitan area water quality. It will monitor the results of completed work to determine effects on water quality and establish a data management system to track results. The WQICC mandate also includes coordination of the long-term implementation of MTRAP strategies.

On April 12, 1990 the Municipality made a commitment to the environment:

"The Municipality of Metropolitan Toronto, as a responsible corporate citizen, is committed to leadership in policies, operational procedures, and service delivery practices that are based on sound environmental principles."

Since that time Metropolitan Toronto has also begun to improve internal environmental practices within the Corporation. One of the earliest programs the Municipality became involved in is **Governments Incorporating Procurement Policies to Eliminate Refuse** (GIPPER), designed to reduce the level of waste in government through cooperation with representatives from both waste management and purchasing departments of different levels of government and other concerned organizations. GIPPER has targeted 50% waste reduction by the year 2000. The focus of the procurement policies will be to reduce the volume of waste, provide markets necessary to promote and sustain the reduction, reuse, recycling and recovery of materials, and to facilitate cooperative purchasing.

Metropolitan Council recently established an **Environmental Secretariat**, to identify, initiate and monitor programs to improve the Metropolitan Corporation's environmental performance, providing leadership in urban government environmental practices. Guided by the Corporate Strategic Plan, the Secretariat will foster the integration of environmental considerations in Corporate decision-making.

The Metropolitan Challenge

The decisions made by Metropolitan Toronto not only affect the liveability of this metropolis but have far-reaching impact outside of its borders. It is apparent that there are a variety of diverse activities underway initiated by all levels of government, aimed at improving the liveability of the urban environment. Unfortunately, policies and programs are not always mutually supportive, and often there is a lack of coordination between governments and their agencies, and across sectors.

The necessity of stressing the complex ecological and economic linkages within *the "global village"* implies that the metropolis can only maintain and enhance its liveability within a much broader context than its own borders. However, many environmentalists argue that action will be most effective if led by agencies at the local or regional level, particularly if those actions complement that of neighbouring regions. Metropolitan Toronto, for example, can take effective action to drastically reduce the level of pollutants currently being emitted into the air, water and soil, preserve and enhance existing natural areas, and strengthen the social infrastructure.

By the consistent application of fundamental principles which guide decision-making, Metropolitan Toronto can enhance its image as a clean community and promote equity and prosperity. Metropolitan Toronto has a significant role to play both in terms of concerted action within its borders and in terms of its ability to promote similar action with neighbouring regional partners in the Greater Toronto Area and within the broader Great Lakes community.

If the concept of a liveable metropolis is to be realized here, Metropolitan Toronto has work to do. First, knowledge and an understanding of the ecological processes at work in our urban environment, and the cumulative impacts of individual, corporate and societal behaviours on the ecosystem is required. Second, principles must be articulated to guide behaviour. Third, a new framework for decision-making which entrenches these principles must be adopted. Then concrete and consistent implementing actions must be taken.

Natural process, unitary in character, must be so considered in the planning process: that changes to parts of the ecosystem affect the entire system, that natural processes do represent values and that these values should be incorporated into a single accounting system.

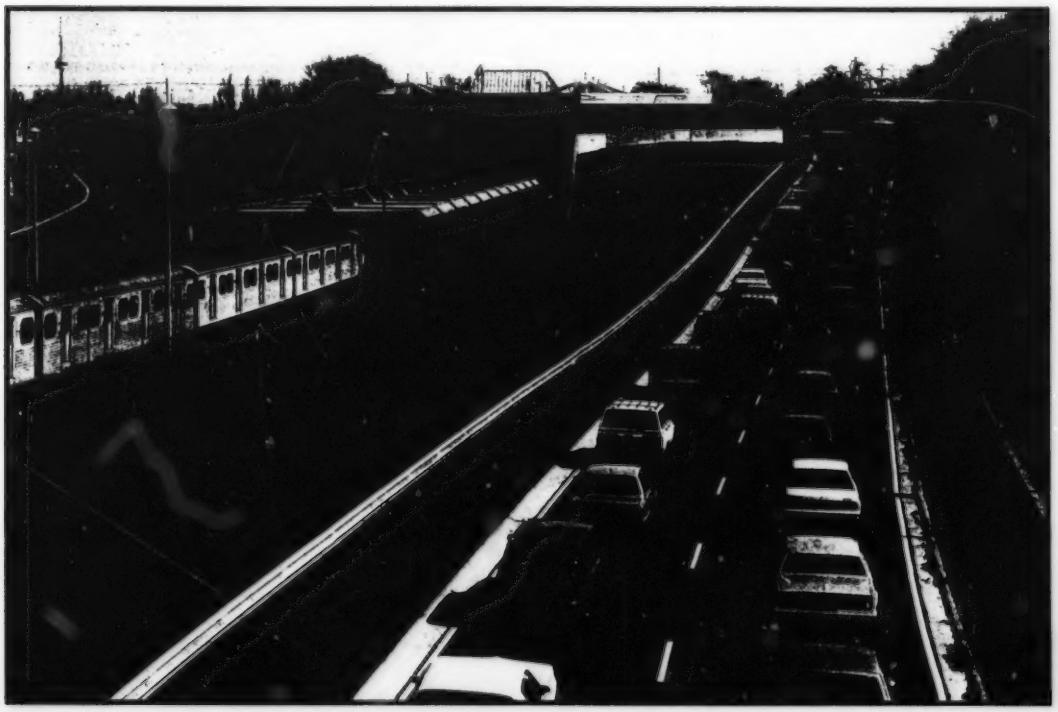
Ian McHarg

Chapter Four

OPPORTUNITIES FOR CHANGE

The writers of history have seldom noted the importance of land use. They seem not to have recognized that the destinies of most of man's empires and civilizations were determined largely by the way the land was used. While recognizing the influence of environment on history, they fail to note that man usually changed or despoiled his environment.

E.F. Schumacher



The historical development of our communities has contributed to many of the issues of concern in the metropolis today: expensive housing, long commuting trips, beach closings, hostile pedestrian environments, waste production and disposal, noxious odours, congestion and so on. While there is little disagreement about the importance of environmental, economic and social considerations to the liveability of the metropolis, problems arise, however, with the manner in which these concerns are integrated into planning systems. Significant changes in the approach to planning, and specifically to the **Metropolitan Toronto Official Plan**, are required if the liveability of the metropolis is to be maintained and improved.

A Coordinated Strategy

Many of the directions proposed in this section reflect and elaborate on initiatives identified in the Metropolitan Strategic Plan: improving corporate practices; the development of an information base on the state of the environment and appropriate indicators of change; the establishment of targets; and the implementation of remedial action plans. This section includes concrete examples of the kinds of action Metropolitan Toronto could take to better manage the use of natural, human and fiscal resources to sustain a liveable metropolis for future generations. As a regional level of government, Metropolitan Toronto can provide leadership through its policies, programs, and plans, influencing the actions and investments of public agencies, area municipalities, and private corporations. Regulations and incentives can also be used to direct change.

Traditionally, economic parameters have been the primary determinants for decision-making. Sophisticated state-of-the-economy reporting, financial systems, economic indicators and targets have evolved and are readily available. Recognition that equivalent social and environmental parameters are needed has occurred relatively recently. It is appropriate, therefore, that in proposing strategies to enhance the liveability of the metropolis, the focus be on enhancing the environment and optimizing benefits to the community.

Changing Corporate Practices

A re-examination of Metropolitan practices and procedures is required if the principles set out in Chapter 2 of this report, and summarized in the figure of page 26, **A New Framework for Decision-Making**, are to be put into practice. It is essential to ensure that the Corporation's own behaviour is consistent with these principles. In particular, emphasis must be given to better aligning Corporate practices and procedures with enhancement of the environment.

INITIATIVE 1:

Compile and assess all corporate practices and procedures in terms of cumulative impacts on the environment, to provide a basis for the development of appropriate Corporate practices.

A commitment to environmental integrity should be reflected in all aspects of the Corporation's business practices. This can be accomplished through means such as waste reduction, energy conservation, increased efficiencies, adopting environmentally friendly alternatives, utilizing the best technology available and adherence to an international protocol which rejects environmentally destructive production measures for products the Corporation purchases. These initiatives would maintain Corporate integrity while providing a stimulation for new industry and local employment opportunities.

INITIATIVE 2:

Develop a strategy to ensure that Corporate practices and procedures enhance the environment by reducing pollution and conserving resources.

The Corporation, in collaboration with all levels of government, could devise a strategy to phase out the use of toxic pesticides in parks and natural areas, and salt on roads. The selling of leaded gas at marinas leasing public lands could be prohibited in leasing arrangements. The amount of unnecessary paved surfaces in the urban area could be reduced and replaced with hardy natural ground covers and more permeable coverings. The proportion of

TOWARDS A LIVEABLE METROPOLIS: A NEW FRAMEWORK FOR DECISION-MAKING

1. **Adopt an ecosystem approach which is anticipatory and preventative.**

2. **Wisely manage the use of natural resources through conservation, preservation and enhancement.**

3. **Promote the integration of environmental, social and economic considerations with the intent of sustaining environmental integrity, social well-being and economic vitality, and ensuring that the output of one sector does not cause serious dysfunction in another sector.**

4. **Ensure equitable distribution of resources both in-terms of meeting the diversity of needs today and leaving options open for future generations.**

5. **Promote safety and health, cultural and community expression, and aesthetics within the metropolis.**

6. **Promote and facilitate public participation as an integral part of the decision-making process.**

7. **Foster society's responsibility as stewards of the ecosystem.**

unstructured parkland could be increased to provide for a variety of natural habitats and enhanced natural processes. In addition, corporate strategies for water and energy conservation and waste and CO_2 reduction could be developed. All of these actions would combine to positively affect air, soil and water quality.

INITIATIVE 3:

Develop accounting and budgetary mechanisms for integrating environmental and social costs and benefits into Corporate fiscal management systems.

In order to measure not only the quantity but the quality of programs and their impact on the environment, new accounting and budgetary systems which ascribe appropriate monetary values to all public resources will be required. The existing economic indicators may record gains in income while masking permanent losses in natural and social assets. In particular, financial systems which treat the deterioration of natural resources as another form of capital depreciation are needed. This requires that prices include the full environmental costs of production, use and disposal. Such an approach not only enhances appreciation of the value of resources, but provides a disincentive to overconsumption and pollution.

Explicitly recognizing the value of natural and social resources by assigning an equivalent price, akin to those of the existing financial system, will enable the accounting and budgeting processes to reflect the cost and benefits associated with the use of resources, and incorporate social benefits into the equation. In this way, parameters for decision-making would be developed which recognize that environmental integrity and social well-being are fundamental to the economic vitality of present and future generations.

There are considerable challenges involved in developing such accounting and budgetary processes. As a first step, two or three measures of resource use such as CO_2 emission and B.T.U. consumption could be assigned costs so that high emissions and consumption are reflected in higher costs. Since no ready model currently exists, an incremental approach is suggested.

Initiative 4:

Ensure a consistent approach for assessing the environmental, social and economic implications of Metropolitan actions by such means as the development of Corporate guidelines.

Current guidelines and procedures dictate reporting on the financial implications of Corporate actions. A great deal of discretion, however, is given regarding the types of other implications to be reported. At present no consistent procedures are in place for assessing the environmental and social implications of plans, policies, programs and operational actions. Metropolitan Toronto needs to institute consistent means to assess the environmental, social and economic implications of the proposals before Council. This type of assessment will not be easily accomplished, yet guidelines should be developed to ensure that matters will be dealt with consistently.

Measuring Change

Integral to enhancing the liveability of the metropolis and sustaining the urban ecosystem is behaviourial change on the part of individuals, corporations and society as a whole. This requires a better understanding of the natural systems and human impacts on them. The development of an information base describing the current state of the environment, the establishment of indicators to assist decision-makers and the public in understanding trends and assessing progress, and the setting of targets are critical first steps. Further, a comprehensive approach to ongoing public education and information is needed with institutional arrangements that promote cooperation and collaboration. It is only through the combined commitment and joint action of governments, private and non-profit organizations and individuals that progress will be made.

i) State of the Environment

While sophisticated techniques and considerable financial resources are used to assess the state of the economy, state of the environment reporting is in its infancy. If the liveable metropolis is to be achieved, better information is needed regarding the natural environment and the ecological processes it sustains.

Initiative 5:

Develop a profile of the current state of the environment within Metropolitan Toronto, and monitor changes by updating the profile every three years.

A state-of-the-environment report would contain baseline information such as the identification of environmentally significant areas; zones of influence within which the protection of specific natural processes requires special attention, such as the forces which influence the shoreline configuration of the lake; sites which are known to be contaminated or where the existing or previous use would indicate contamination; and the assimilation capacity of natural features and process such as the loading capacity of the lake and rivers. This information will provide a better understanding of the interrelationship between natural areas, processes and land uses, facilitate preventative and active decision-making, and assist in the enhancement of the metropolis. It also will provide a baseline against which changes can be monitored and assessed

in both the short and long term. Producing a comprehensive report will be a difficult task and initially the report will have to be based on the limited information that is currently available but which has never been compiled in an integrated fashion.

ii) Developing Indicators

If state-of-the-environment information is to be useful to assess progress, indicators need to be established. These would provide a mechanism to evaluate the impact of policies and programs and to monitor change.

INITIATIVE 6:

Develop indicators of liveability which include environmental, social and economic factors to evaluate the impact of policies and programs and to monitor change.

There are a variety of indicators which may be used to assess the health of specific dimensions of the metropolis, including:

- environmental indicators such as the quantity of pollutants released into the atmosphere, water or soil, the concentration of pollutant substances in the atmosphere, water and soil, the quantity and quality of natural resources such as wooded areas, fresh water, habitats and species, and the efficiency of technological processes;
- social indicators such as the crime rate, the health of the population, housing availability, homelessness, availability of employment opportunities, access to services and facilities, rate of population growth, and degree of public participation in decision-making;
- economic indicators such as per capita debt, unemployment rates, average wage, diversity of economic activities, cost of living, employment growth or decline, and labour force participation rates.

While these discrete indicators of economic vitality, social well-being, and environmental integrity are useful tools, they often fail to address the interrelationships between components and thus the appropriate balance critical to liveability.

The development of indicators which integrate environmental, social and economic factors is a complex undertaking which would benefit from input from a wide variety of interest groups, governmental jurisdictions and academics. One approach is to develop "sectoral" indicators. Such indicators assess the impact of specific sectors on the environment and assist in determining the policies to be established to reduce this impact and enhance the urban environment. For example, using the transportation sector, indicators could identify the number of vehicles and the average number of kilometres per vehicle, emission pollutants and noise, technical efficiencies, and structural and economic change which could help to improve the integration of transportation policy with environmental policy, such as pricing and taxation. It is anticipated that both quantitative and qualitative indicators will be developed and used to evaluate the impact of policies, programs and proposals on liveability. This requires analytical techniques and consultative procedures for evaluating and reconciling a complex quantity of information which is in part fact, and part values.

Given that behaviour change is required by individuals as well as corporations, indicators of liveability are required which are widely understandable and meaningful to the public, such as beach closures and restrictions on eating fish caught in local lakes.

iii) Setting Targets

Environmental policy will increasingly be established by government, institutions and nations.

Cooperation among the various governments and agencies in setting targets is required. Success in achieving targets is much more likely when resources are combined to a common purpose. Most governments, especially regional and municipal, have rarely had sufficient jurisdiction or resources to establish and enforce environmental targets alone. Conflicting targets and priorities lead to wasteful expenditures and disputes. The global nature of environmental issues ensures that even robust local initiatives to protect the environment will be undermined if similar action is not undertaken on a wider scale. It is therefore vital that Metropolitan Toronto consider its own role with reference to initiatives and policies of the federal, provincial and other municipal governments. The figure on pages 30-31 summarizes existing governmental targets.

INITIATIVE 7:

Identify targets and develop implementing strategies for all Metropolitan departments, boards and agencies.

Recognizing the shared responsibilities and jurisdictions, and the status of Metropolitan Toronto, it would be appropriate that Metro provide leadership through collaborative efforts to achieve targets for reduced consumption and increased efficiency, and the utilization and promotion of low or non-polluting alternatives. The **Corporate Strategic Plan** will require Metropolitan departments, boards and agencies to include environmental objectives in their mandates to guide operational decision-making. The **Strategic Plan** sets out Metropolitan targets and each Department and agency will be responsible for developing strategies for helping to achieve these targets, such as the reduction of CO_2 emissions, the conservation of energy and water resources, and the reduction of waste.

The real challenge is to establish targets which are based on enhancement, rather than only minimizing negative impacts, while providing realistic goals within a given timeframe. Targets, relating to specific quantifiable achievements within a defined timeframe, can be assessed and monitored to determine rates of progress and periodically adjusted as results are achieved.

A number of mechanisms in addition to public education and information are available to Metropolitan Toronto to facilitate change and realize targets. These include the planning process (which is discussed in the following chapter), incentives and disincentives (such as preferential taxation), levies, waste disposal, water pricing policies, private financing of public resources (such as transit lines), and direct public investment. Finally, agreements and partnerships may enable accord to be established under a climate of cooperation and mutual advantage.

Repairing the Damage

While the focus of policies and plans should be on appropriate resource use and equitable distribution, it is important that past degradation of the environment be remediated. To this end clear jurisdictional responsibilities and appropriate resources are required.

INITIATIVE 8:

Actively pursue the implementation of appropriate remedial actions, including those proposed through the MTRAP process.

To date the most comprehensive approach to remedial action has been undertaken with respect to water quality. In addition to being actively involved in the Metropolitan Toronto Remedial Action Plan (MTRAP), Metro is participating in the Municipal-Industrial Strategy for Abatement (MISA). Through the adoption of a sewer use by-law, the quality of discharged sewage is regulated by adherence to specified standards.

GOVERNMENT ENVIRONMENTAL TARGETS FOR THE YEAR 2000

Environmental Issue	Level of Government: Federal	Provincial	Metro Toronto Municipalities
Ozone Depletion:			
Chloroflorocarbons (CFC)	• Elimination of imports and production of CFC's, halogens and methylchloroform by 1990 • 85% reduction in CFC concentrations by the year 2000	• 50% reduction in CFC emissions from 1986 levels by 1998 • complete elimination of CFC emissions by the year 2000	• 80% reduction in CFC emissions by the year 1998 (City of Toronto)
Greenhouse Gases:			
Carbon Dioxide (CO_2)	• 20% reduction in CO_2 emissions by the year 2005	• 20% reduction in CO_2 emissions from 1988 levels by the year 2005	• 20% reduction in CO_2 emissions by the year 2005 (City of Toronto)
Other Greenhouse Gases	• stabilization of all other greenhouse gases at current levels by the year 2000		
Acid Rain:			
Sulfur Dioxide (SO_2)	• 50% reduction in SO_2 emissions by 1994 in 7 easternmost provinces	• reductions in SO_2 emissions by 60% by 1994 • industry-specific reductions of the year 2000	• measured levels in Metro are well below National and Provincial criteria
Nitrogen Oxides (NO_x)	• freeze NO_x concentrations at 1987 levels by the year 1994		• Metro levels below provincial standards
Waste Reduction:			
Solid Waste	• 50% reduction in solid waste generation by the year 2000	• solid waste diversion of 25% by 1992 and 50% by the year 2000	• by the year 1992 divert 25% of industrial, commercial and municipal solid waste from disposal to achieve an absolute reduction of at least 15% from 1988 levels • by the year 2000 reduce production of industrial, commercial and municipal waste to achieve an absolute reduction of at least 15% from 1988 levels
Hazardous Waste and Toxic Substances	• achieve zero discharge of persistent toxic substances by the year 2000	• achieve zero discharge of persistent toxic substances by the year 2000	
Reforestation:	• replanting of 2 million hectares by the year 2000	• planting of 5 million trees in municipalities over 25,000 by 1995 in areas outside of parks and conservation areas	• establish a tree planting program that will significantly increase the number of trees in Metro by 1992

Continued on page 31

GOVERNMENT ENVIRONMENTAL TARGETS FOR THE YEAR 2000

Environmental Issue	*Level of Government*		
	Federal	***Provincial***	***Metro Toronto Municipalities***
Parks:	• complete the national parks system by the year 2000 • complete 50% of Canada's marine parks system by the year 2000		
Land Conservation:	• protect no less than 12% of Canada's land mass within a system of representative areas		
Energy Efficiency:		• Ontario Hydro to reduce electricity demand by 3500 megawatts by the year 2000 • reduce energy use per dollar by 20% or more by the year 2000 • 10% improvement in energy efficiency in government buildings by 1992 • meet an average fuel economy level of ten litres per 100 kilometres for government vehicles by the year 1992	• by 2005 reduce consumption of electricity and non-renewable fuels within Metro Toronto government operations by at least 20% from 1988 levels

It is only relatively recently that the contamination of soil has been recognized as a serious problem. A lack of clarity about which level of government has jurisdiction for remediation and prevention of soil contamination, coupled with limited enforcement capabilities, has resulted in an ad hoc approach. Contaminants tend to be identified through the local development process when land use changes are proposed and remediation is negotiated with the current owner of the property. Research and technological development are required to provide ready access to the best technology available, and policies requiring the polluter to remediate need to be strengthened by the federal and provincial governments.

Planning for Change

While there is much that Metropolitan Toronto can do as a responsible Corporate citizen, a policy framework is needed to guide change if programs and initiatives are to be mutually supportive and all sectors of the community are to participate. This section, therefore, outlines proposed planning policy directions for Metropolitan Toronto, and suggests possible revisions to enhance the development review process.

Policy Directions

The Metropolitan Plan Review, the Economic Development Strategy, and the Social Development Strategy have all identified worthwhile changes to the ways the various components of the urban environment are planned and managed. In adopting the framework for decision-making outlined on page 26, land use, economic and social strategies would focus on a common vision of the liveable metropolis and therefore be mutually reinforcing. This means that the Economic Development Strategy recognizes environmental and social objectives, and the Social Development Strategy recognizes economic and environmental objectives. The Corporate Strategic Plan provides overall goals and priorities which are reflected in the policy framework set out in the Metropolitan Official Plan.

The Official Plan provides a legislated framework for guiding the physical development of the metropolis. It sets out a vision for the future of the metropolis through a statement of goals and outlines policies addressing issues of Metropolitan concern. Implementation of those policies is a shared responsibility of the Metropolitan government, area municipal governments and the community.

Liveability can and should become a central tenet of the Official Plan of Metropolitan Toronto. The Official Plan could contain explicit goals and policies, reflecting the principles outlined in Chapter 2, for promoting economic vitality, environmental integrity and social well-being, thus enhancing the liveability of the metropolis. To be effective, goals and objectives should be tied to specific criteria for implementation.

INITIATIVE 9:

In the new Metropolitan Official Plan, include policies which reflect the following objectives:

1. **Conserve, protect and enhance natural areas and the life forms and processes they support by identifying in the Metropolitan Official Plan natural areas of regional significance and areas where natural processes should be restored and/or enhanced and/or protected.**
2. **Optimize the density potential of the existing urban area in order to make the most efficient and effective use of the public investment in infrastructure, and conserve natural resources.**
3. **Balance the location of labour force population with employment opportunities.**
4. **Maximize the use of transportation alternatives to the automobile including transit, commuter rail, bicycles, and walking.**
5. **Promote a sense of community, create opportunities for social interaction, support a range of community services, facilities and programs, and recognize and appreciate the value gained from the diversity.**
6. **Protect and enhance heritage features and urban aesthetics, placing importance on high quality urban and building design.**
7. **Maintain options to facilitate the meeting of future needs and adaptation to unexpected events.**

While past environmental damage needs to be remediated, the Official Plan should focus on wise resource use throughout the Plan. All sectors or components of the Plan need to include mutually supportive policies. Policies affecting the individual elements for each sector, such as housing, transportation and industry, have direct consequences in terms of land consumption, loss of natural areas (habitats and species), energy consumption, effectiveness of infrastructure

investment, air, soil and water quality, stability of natural processes (eg. water filtration, climate, cleansing air of pollutants, etc.), equitable access, range of options or choices, and human health, safety, mobility and enjoyment. The multidimensional nature of urban issues, and therefore policy responses, is reflected in the figure on the next page.

To achieve specific objectives, such as CO_2 reduction, energy conservation or water quality improvement, policies are needed in relation to all components or sectors of the Official Plan. Planning energy-efficient land use, promoting higher density and clustered development, improving building design, reducing the use of the automobile and encouraging more use of transit, zoning for mixed use, increasing and enhancing natural areas and the proportion of natural vegetation and ground cover associated with each development, undertaking district heating and cooling schemes, and recycling waste heat are examples of measures that could be used to capitalize on the opportunity to save energy, increase efficiencies and reduce CO_2 emissions.

In addition, economic policies need to be developed which promote movement away from resource-intensive, pollution-prone technology to a new generation of environmentally benign applications. Similarly, social policies are needed which promote a more equitable sharing of public benefits today and for future generations.

If environmental and social considerations are to be integrated into the Metropolitan planning process, the current planning framework needs to be extended in at least three ways:

1. redefining the planning framework to fully integrate environmental and social objectives. This requires an understanding of natural processes and their interdependence with economic and social activities, and an appreciation of both the physical and social processes operating in the Metropolis;
2. refining the process for reviewing development applications; and,
3. establishing a process for ongoing monitoring and evaluation; including the development of indicators against which the effectiveness of policies, programs and initiatives may be assessed and progress measured.

The Development Review Process

Given the positions expressed in this report, proposals for development should be reviewed to determine their environmental, economic and social impacts. The current development review process by its very nature is reactive. Emphasis is placed on checking for conformity to land use policy and service availability. Its function is to review proposed developments and land use changes. While it is important to regulate, a policy framework which is proactive and anticipatory, setting out the municipal strategy for development, is warranted. The resulting revised development review process would stress the dynamic interrelationships between components of the urban ecosystem. The following section suggests a revised process for reviewing development applications from the regional perspective. Key elements of the proposed review process are environmental and social impact evaluation and adherence to performance standards.

INITIATIVE 10:

Integrate environmental, social and economic considerations into a revised development review process.

Integration of environmental and social considerations into the development review process will enable the Metropolitan government to evaluate developments in terms of anticipated impacts on the natural environment and the

EXAMPLES OF HOW SECTORAL POLICIES AND PROGRAMS AFFECT LIVEABILITY

Components of Liveability

Sectors	Environmental Integrity	Social Well-Being	Economic Vitality
Housing	• design • density • location • energy source & consumption	• affordability • availability • options • sense of community	• labour force availability • employment opportunities • infrastructure investment • materials availability
Physical Infrastructure	• land use pattern • modal split • energy source & consumption • design • technology • efficiency	• affordability • comfort, safety & health • access to transit • availability of options • mobility	• capacity • alignment • goods mobility • infrastructure investment
Natural Environment	• productivity • diversity • viability of processes • conservation • preservation techniques	• health & safety • recreation/leisure • options • aesthetics • climate • resource availability	• resource availability • employment opportunities • product diversity • research & development • leisure/tourism industry • natural asset protection
Employment and Commerce	• design • density • efficiency • waste production • resource consumption • location	• income independence • options • work environment	• infrastructure investment • variety • competitiveness • activity level
Social Infrastructure	• design • location • environmental sensitivity	• availability • independence • opportunity for cultural expression • options	• labour force satisfaction • leisure/tourism industry
Education	• information • awareness • behavioural change	• opportunity for personal development • health protection	• training • research & development

community, assess the opportunity costs of proceeding with the proposal or not, and examine and institute methods of reducing impacts, all within the context of the Planning Act. Consideration of environmental and social factors in the early planning stages will help to avoid delays when development applications are before Metropolitan Council, or other boards or commissions, for approval. The assessment process will provide a forum for public scrutiny of both municipal and private developments.

Initiative 11:

Develop a methodology for incorporating criteria which assess cumulative impacts into the development review process.

Most of the effects in complex ecosystems are cumulative and few are the result of individual stressors acting in isolation from others. Cumulative effects have been defined as: "impacts on the natural and social environment which occur so frequently in time or so densely in space that they cannot be assimilated, or combine with effects of other activities in a synergistic manner." (K. Davies, 1990) In other words, the compound effects of development and activities threaten to overload the community's social and environmental systems.

Unfortunately many issues associated with assessing cumulative effects remain unresolved. Included are definition of time horizons and geographic boundaries, determination of the value and significance of different effects, development of general guidelines for methodologies that are not case-specific, ensurance of consistency, coping with information gaps and developing appropriate institutional/procedural/legislative arrangemen'3. These issues need to be resolved and appropriate assessment tools developed before cumulative impacts can be effectively addressed.

To include cumulative impacts in the assessment of a proposed development requires that geographic limits of the area impacted be defined in a pragmatic manner. This is a significant challenge. Planning and decision-making tends to occur within a hierarchy of political boundaries: provincial (Ontario), interregional, Metropolitan, and local (area municipal) governments. While political jurisdictions are important, planning must also consider the hierarchy of natural, social and economic systems: for example, drainage basins, watersheds, and catchment areas; commutersheds; and economic catchment areas. This tiered approach can be employed as an overlay on political boundaries so that Metropolitan planning, for example, may effectively consider impacts within its biophysical and economic areas of influence while developing and implementing policies within Metropolitan Toronto's boundaries.

Metropolitan Toronto through the waterfront planning process is undertaking research to develop tools for assessing the cumulative effects of development and activities along the Metropolitan Toronto waterfront. It is anticipated that this work will improve environmental input to the existing planning process, and provide criteria for assessing development on both a broader geographical and longer-term basis.

A pragmatic and effective process depends on clearly stated Metropolitan policies and standards and the establishment of a realistic review process. It is important to consider the human and fiscal resources required to assess environmental and social impacts in the planning process. Reason has to guide the establishment of criteria; the results should justify the investment.

INITIATIVE 12:

Request the Province of Ontario to more fully integrate economic, environmental and social considerations into the Planning Act.

i) Environmental and Social Impact Evaluation

The provincial government has been reviewing the potential integration of the Planning Act and the Environmental Assessment Act, in part or in whole. This report supports the integration of these Acts. Meanwhile, environmental concerns are paramount in the public view and land use decisions continue to be made. Therefore, it is incumbent upon Metropolitan Toronto to incorporate environmental and social considerations into the regional development review process.

INITIATIVE 13:

Require environmental and social impact evaluation of all major developments.

Through the land use planning process, Metropolitan Toronto could require an environmental and social impact evaluation for all major developments within the context of the regional development review process. (This should be distinguished from the Environmental Assessment Act, its requirements and process.) This evaluation would assess both the effects of human activities on environmental characteristics and vice versa. It is generally understood and acknowledged that a development has an impact upon the environment when it exposes (or potentially exposes) people to environmental conditions which are substantially different from those to which they would be exposed if the project were not present. It is now recognized that human activities and development also have an impact on the natural environment when they disturb the balance of the ecosystem and its ability to sustain productive processes.

Further, such an evaluation would assess the human costs and benefits of planned changes and their equitable distribution in the community. Much work has been done by the **Social Development Strategy Task Force**, examining various methods for assessing the social impacts of Metropolitan policies, programs and developments on the community. This will assist greatly the development of appropriate criteria in the development review process.

In accommodating environmental and social considerations the development review process would address such issues as:

- what is being proposed, what alternative designs have been considered, whose needs are being addressed?
- who will be affected by the proposed development and what aspects of their quality of life will be affected?
- what are the likely impacts of the develop ment on the human and biophysical environments, including biotic (living) and abiotic (non-living) resources, hydrologic cycle, etc.?
- how would the impacts differ under any of the alternatives identified?
- what measures will be taken to enhance the integrity of the ecosystem; to ensure that the development proposed will pass on benefits and not liabilities to the broader community?

A checklist format is envisioned which will catalogue Official Plan policies and summarize the proponent's approach towards satisfying these policies. In order to complete the checklist the proponent would have to undertake studies which set out information about the community and the environment, the anticipated post-development changes and the plans for directing these changes towards environmental gains and broader community benefits. One of the purposes of the checklist is to provide a context for

Council and potentially impacted communities to understand the social, environmental and economic implications of the proposed development and the choices available to them.

Including environmental and social impact evaluation requirements within the Metropolitan development review process would also provide practical experience within a local context. This would assist in the creation and improvement of tools and mechanisms for addressing ecosystem integrity, such as:

- assist in the development of measures aimed at ameliorating the effects of environmental degradation such as the pollution of land, air and water resources;
- promote an integrated resource management strategy by conserving and enhancing the interaction between the biological community and the built environment;
- facilitate the improvement of methods available for assessing development and the identification of measures to prevent adverse impacts;
- provide a mechanism for assessing developments in the context of targets; for example to reduce CO_2 emission levels by maintaining biomass on site and improving modal split in favour of transit.

While the tools to assess the impacts of a development on a specific site at a discrete point in time exist, the balancing of priorities remains subjective, and mechanisms to assess cumulative impacts, as discussed, require further development.

ii) Performance Standards and Criteria

A complementary technique to the inclusion of environmental and social impact assessments into the development review process is the establishment of performance standards. Measurable standards would be clearly articulated based upon goals and objectives contained in the Official Plan. Where targets exist, these would be used to establish performance criteria. The onus would be on the proponent of the development to demonstrate how the standards are being met.

INITIATIVE 14:

Develop appropriate performance standards for inclusion in the development review process, and develop guidelines to assist in the implementation of these standards.

The following provides examples of the type of performance standards, linked to ecosystem benefits, which could be established:

- % of paved, semi-permeable and natural surfaces in a development;
- degree of housing intensification;
- impact on modal split (% of travel by mode: car, foot, transit, cycle), such as degree of pedestrian access and attention to pedestrian scale streetscapes;
- amount of vegetation and landscaped area (biomass) on site prior to and after proposed development;
- attention to on-site water conservation;
- employment of environment-friendly construction practices;
- attention to energy conservation, for example use of solar heating;
- integration of on-site and adjacent natural areas; and,
- integration of proposed development into the existing community.

The criteria established would be based upon the indicators of ecosystem integrity discussed in the previous chapter.

A Stewardship Perspective

The mandate of stewardship provides for a sharing of responsibility among the public and its governments, as managers of community resources and as stewards of the natural environment. It is only through the combined commitment and joint action of individuals, governments, private and non-profit organizations that progress will be made.

Achieving the liveable metropolis will require a fundamental change in the behaviour of individuals, corporations and society, particularly with respect to managing human activities in relation to the environment. The scale and scope of behaviourial change required can only be achieved through commitment and partnerships. Public participation is integral to planning the liveable metropolis; partnership is essential to development and implemention of strategies to maintain and enhance the quality of urban life. Metropolitan Toronto has an important role to play in heightening public awareness and developing partnerships. The range of educational opportunities available is virtually unlimited. Many initiatives do not require large investment from the Corporation.

INITIATIVE 15:

Develop an effective and pragmatic strategy for public education and information which builds on the initiatives of other levels of government but is specific to the needs of Metropolitan Toronto.

Collaborative partnerships between the public, private and non-profit sectors may provide opportunities for increasing awareness. Demonstration projects provide an opportunity for the public and industry to see practical ways for remediation to be undertaken. Many such projects could be entirely provided by the private sector as a gesture of concern for the environment and a way to improve public relations. Demonstration projects capture public interest and build a sense of community. Public forums provide an opportunity for individuals and groups to attain prestige through an acknowledgement of expertise and a forum for them to be heard. They demonstrate Metropolitan Toronto's recognition of the importance of individuals and the role they continue to play in shaping Metropolitan policy. Another way of increasing public awareness is to provide incentives for business and private initiatives designed to increase awareness through facilitation, awards and public recognition.

Media coverage of initiatives and promotional campaigns can increase community awareness and a sense of the commitment of the Metropolitan government to enhancing the liveability of this community and enhance the image of Metropolitan Toronto as an environmentally responsive government.

School programs constitute another way to raise public awareness, as well as provide educational enrichment for children. Such programs might include community service after school, neighbourhood cleanups by school children, reclaiming resources which are being thrown out such as clothing and paper, and the use of business scrap paper (blank on one side) in schools. The Corporation could set an example by providing such paper to schools as an alternative to recycling.

There is no question that education in our schools must aim to improve attitudes towards the environment and that this has to be legislated as compulsory for early graders.

J.R. Orlando, A Report on the Green Plan Consultations

An environmental reference system building on existing libraries and information systems would provide a centre for environment-related resources which would be valuable to the public, business and industry, and governments. Metropolitan Toronto could encourage environmental themes in the arts by providing prizes, free space for environmentally related productions, and incentives for examination of such themes in an arts context.

Finally, citizens' environmental monitoring programs enable the public to be involved in assembling information and assessing the level of environmental improvement over time, while increasing the accountability of the Corporation as perceived by residents. They do not replace official duties, but constitute an additional check on the state of the environment and increase public awareness. In addition, inventories assembled by citizens can be a valuable educational resource and a source of informed meaningful views.

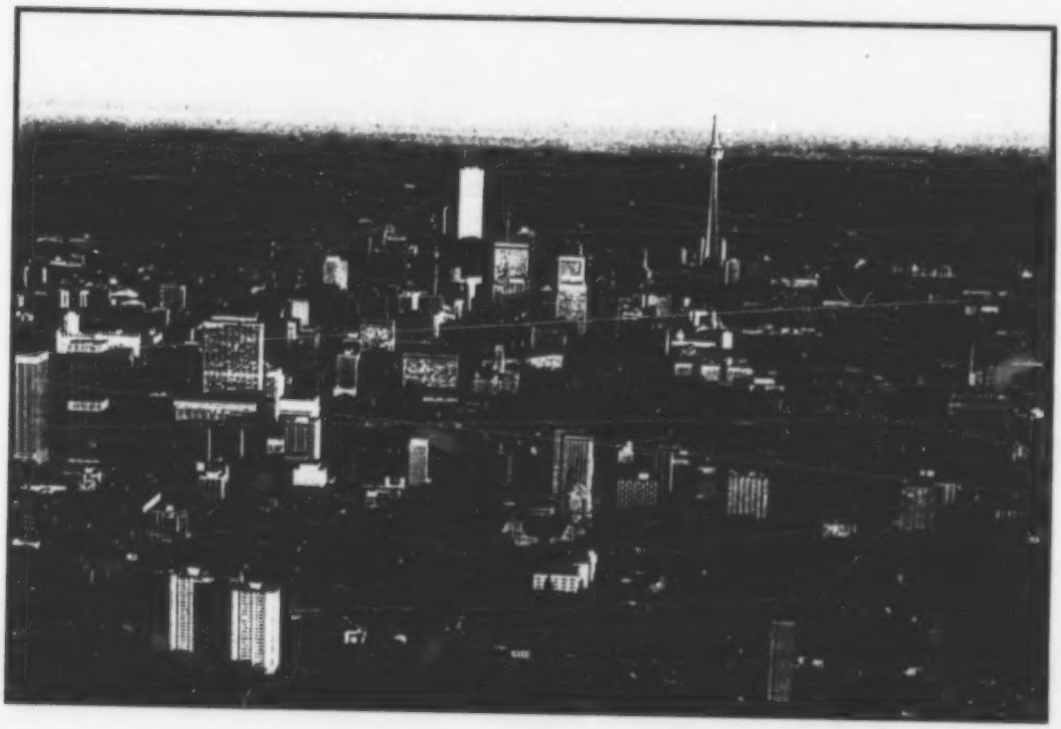
Everyone who lives, works or plays in the metropolis has a personal stake in ensuring that their activities contribute positively to the health of the community. Through information, dialogue and partnerships, the biophysical and human potential of the urban environment can be optimized.

Chapter Five

CONCLUSION AND SUMMARY OF INITIATIVES

The Municipality of Metropolitan Toronto,
as a responsible corporate citizen, is committed to leadership in policies,
operational procedures, and service delivery practices
that are based on sound environmental principles.

Metropolitan Toronto Council, 1990.



The urban ecosystem comprises a dynamic interconnected network of systems. Humans are an integral part, Recognition of the metropolis as an urban ecosystem is leading to a new urban ethic. The appreciation of quality of life, involving aesthetics, social and cultural considerations transcends the desire for higher standards of living.

The goal of a liveable metropolis dictates human behaviours and activities that combine to support:

- a physical environment in which the land, water and air are of a quality and quantity to support healthy self-sustaining communities;
- self-sustaining biological communities char acterized by variety of habitat and diversity of species; and,

- safe, attractive neighbourhoods which meet peoples' needs by supporting diverse lifestyles and human experiences while fulfilling society's responsibility for stewardship of the ecosystem.

This report has outlined major public concerns facing decision-makers today. It has highlighted current initiatives in response to these issues and identified opportunities for change. Metropolitan Toronto has a key role to play in meeting the challenges today and, as it moves towards a liveable metropolis, in the decades to come.

This report has argued that the principles of equity, sustainability, choice and diversity, and shared responsibility should be entrenched in the decision-making process and in the programs which result. It suggests that the essential elements of the liveable metropolis - environmental integrity, social well-being and economic vitality - are interdependent dimensions which must be balanced, and therefore be explicitly addressed in all decision-making. A new framework for decision-making is proposed.

The challenge to Metropolitan Toronto is one of significant dimension. Given the magnitude of the required change and the difficulty in devising workable methodologies and solutions, incremental steps must be taken progressively and consistently.

Specific initiatives are proposed to gradually move the municipality from one which measures success primarily in terms of economic growth, to one which gives equal consideration to environmental and social costs and benefits. Fundamental to managing this change are the directions taken in the new **Metropolitan Official Plan** and the mechanisms developed to implement that Plan.

It is anticipated that this report will provide a basis for debate within the Metropolitan community. A public consultation strategy is currently being established to facilitate discussion through a variety of public meetings, workshops and focus groups, following the release of this report. That dialogue will help to shape Official Plan policies, to move Metropolitan Toronto toward the liveable metropolis.

SUMMARY OF INITIATIVES

It is proposed that the following initiatives be undertaken:

INITIATIVE 1:

Compile and assess all corporate practices and procedures in terms of cumulative impacts on the environment, to provide a basis for the development of appropriate Corporate practices.

INITIATIVE 2:

Develop a strategy to ensure that Corporate practices and procedures enhance the environment by reducing pollution and conserving resources.

INITIATIVE 3:

Develop accounting and budgetary mechanisms for integrating environmental and social costs and benefits into Corporate fiscal management systems.

INITIATIVE 4:

Ensure a consistent approach for assessing the environmental, social and economic implications of Metropolitan actions by such means as the development of Corporate guidelines.

Initiative 5:

Develop a profile of the current state of the environment within Metropolitan Toronto, and monitor changes by updating the profile every three years.

Initiative 6:

Develop indicators of liveability which include environmental, social and economic factors to evaluate the impact of policies and programs and to monitor change.

Initiative 7:

Identify targets and develop implementing strategies for all Metropolitan departments, boards and agencies to facilitate the achievement of identified targets.

Initiative 8:

Actively pursue the implementation of appropriate remedial actions, including those proposed through the MTRAP process.

Initiative 9:

In the new Metropolitan Official Plan, include policies which reflect the following objectives:

1. Conserve, protect and enhance natural areas and the life forms and processes they support by identifying in the Metropolitan Official Plan natural areas of regional significance and areas where natural processes should be restored and/or enhanced and/or protected.
2. Optimize the density potential of the existing urban area in order to make the most efficient and effective use of the public investment in infrastructure, and conserve natural resources.
3. Balance the location of labour force population with employment opportunities.
4. Maximize the use of transportation alternatives to the automobile including transit, commuter rail, bicycles, and walking.
5. Promote a sense of community, create opportunities for social interaction, support a range of community services, facilities and programs, and recognize and appreciate the value gained from the diversity.
6. Protect and enhance heritage features and urban aesthetics, placing importance on high quality urban and building design.
7. Maintain options to facilitate the meeting of future needs and adaptation to unexpected events.

Initiative 10:

Integrate environmental, social and economic considerations into a revised development review process.

Initiative 11:

Develop a methodology for incorporating criteria which assess cumulative impacts into the development review process.

Initiative 12:

Request the Province of Ontario to more fully integrate economic, environmental and social considerations into the Planning Act.

Initiative 13:

Require environmental and social impact evaluation of all major developments.

Initiative 14:

Develop appropriate performance standards for inclusion in the development review process, and develop guidelines to assist in the implementation of these standards.

Initiative 15:

Develop an effective and pragmatic strategy for public education and information which builds on the initiatives of other levels of government but is specific to the needs of Metropolitan Toronto.

Appendix

SELECTED BIBLIOGRAPHY

Aitken, W.R.O. "Conserving the Environment; Sustaining Economic Growth." Canadian Business Review (Summer 1989), pp. 17-20.

Bain, Clifton et al. "Nature Conservation and Structure Plans." The Planner. July 20, 1990.

Blumenfeld, Hans. Criteria for Judging the Quality of the Urban Environment. Paper No. 14. Waterloo: University of Waterloo Faculty of Environmental Studies, 1974.

Blumenfeld, Hans. Metropolis... and Beyond: Selected Essays. Edited by Paul Speiregen. New York: Wiley and Sons, 1979.

Bond, Wayne et al. Conservation and Protection Sustainable Development Progress and Plans. Report of the Conservation and Protection Sustainable Development Steering Committee, 1989.

Brown, Lester et al. State of the World, 1989: A Worldwatch Institute Report on Progress Toward a Sustainable Society. New York: W.W. Norton, 1989.

Brueckert, Dennis. "Environmental Concerns in 1990s Mean Changes For All, Experts Say." The Globe and Mail. January 2, 1990.

Buzzelli, David T. "Sustainable Development." Canadian Business Review (Summer 1989) pp. 22-24.

Canadian Children's Project. Dear World. Agincourt, Ontario: Methuen Publications/Sogides, 1986.

Canada Environmental Advisory Council. Canada and Sustainable Development. Ottawa: Environment Canada, 1987.

Canadian Urban Transit Association. The Environmental Benefits of Urban Transit. 1989.

Carey, Elaine. "Toronto Most Livable City, Survey Finds," The Toronto Star. June 9, 1990.

Carson, Rachel. Silent Spring. Boston: Houghton-Mifflin, 1962

Cholette, Kathryn et al. "Green City: An Introduction." City Magazine (Summer/Fall 1989), pp. 16-23.

City of Toronto Board of Health. A Chlorofluorocarbon Reduction Strategy for Toronto. Toronto, September 1988.

City of Toronto Department of Public Health. Environmental Health Effects of Waste Incineration in the City of Toronto. Toronto, 1987.

City of Toronto Department of Public Health. Health Status Report: 1988. Toronto, 1989.

City of Toronto Department of Public Health. People's Guide to Environmental Protection. Toronto, 1990.

City of Toronto Special Advisory Committee on the Environment, The Changing Atmosphere: A Call to Action. Report no. 1, October 1989.

City of Toronto Healthy City Office and the Technical Workgroup on Traffic Calming and Vehicle Emission Reduction. "Reconsidering the Automobile: A Municipal Strategy." October, 1990.

City of Vancouver Task Force on Atmospheric Change. Clouds of Change. Vancouver, June 1990.

Conservation Foundation, The Institute for Research on Public Policy. Great Lakes, Great Legacy?, 1990.

Daly, Herman E.; Cobb B., Jr. For the Common Good. Boston: Beacon Press, 1989.

Davidson, Alex, and Michael Dence, eds. The Brundtland Challenge and the Cost of Inaction. Halifax: The Institute for Research on Public Policy, 1988.

Data Management Group. Transportation Tomorrow Survey. Toronto, 1989.

Data Management Group. Travel Survey Summary for the Greater Toronto Area. University of Toronto/ York University Joint Program in Transportation, June 1989.

Davies, Kate. Environmental Audit of the East Bayfront/Port Industrial Area. Royal Commission on the Future of the Toronto Waterfront, unpublished, November, 1990.

Department of National Health and Welfare. A New Perspective on the Health of Canadians. Ottawa, 1974.

Department of National Health and Welfare. Achieving Health for All: Framework for Health Promotion. Ottawa, 1986.

Donaldson, Carole; Klein, Heidi. Factbook on Sustainable Development for Municipal Councillors. Toronto: The Conservation Council of Ontario, 1989.

Donaldson, Carole. The Remedial Action Plan for Hamilton Harbour: An Ecosystem Approach? Environmental Ethics and Values, unpublished, January 1990.

Donaldson, Carole. "Sustainable Development and Regional Government: Where to Begin?" unpublished, April, 1989.

Dotto, Lydia. "Climate Change Puts the Heat on Ontario." Challenges, (Spring 1989), p. 3.

Environment Canada. A Primer on Water: Questions and Answers. Ottawa, 1990.

Environment Canada. Green Plan: Consultation Worksheets for the Green Plan Consultations. Ottawa, 1989

Environment Canada. Into the Mainstream: Strategies for a Secure Environment. Ottawa, 1988.

Environment Canada. What Can We Do For Our Environment? Ottawa, 1990.

Environment Ontario. Study of the Ontario Environmental Protection Industry. Toronto, 1989.

Environmental Scan Working Group. "Environmental Scan: Looking Towards 2020." Toronto, unpublished, 1988.

Federal-Provincial Advisory Committee on Environmental and Occupational Health. Environmental Health Issues for the 21st Century. Ottawa: Health and Welfare Canada, 1987.

Fitzpatrick, Malcolm S. Environmental Health Planning: Community Development Based on Environmental and Health Precepts. Cambridge, Mass.: Ballinger Publishing Company, 1978.

Frick, Dieter, ed. The Quality of Urban Life: Social, Psychological, and Physical Conditions. New York: Walter de Gruyter, 1986.

Greater Vancouver Regional District. "Creating Our Future." Technical Report for "Choosing Our Future" publications. June 1990.

Green, Ray et al. "The Future Planning of the Countryside." Paper for the Town and Country Planning Association, 1989.

Gordon, David, ed. Green Cities: Ecologically-Sound Approaches to Urban Space. Montreal: Black Rose Books, Ltd., 1990.

Gordon, A.R. "Air Quality Initiatives in the Transportation Sector: A Municipal Perspective." Prepared for 1990 Special Seminar on Transportation and Air Quality: Technical Issues. August, 1990.

Gossop, Chris. "Choose It or Lose It - Lessons from the Netherlands NEPP." Town and Country Planning 59 (June 1990), pp. 179-181.

Hamilton-Wentworth Planning and Development Department. Directions for the Nineties: Building A Healthy, Sustainable Region, or, Sustaining the Region. Regional Municipality of Hamilton-Wentworth, 1989.

Hancock, Trevor, and Duhl, Leonard J., Healthy Cities: Promoting Health in the Urban Context. Paper for the "Healthy Cities Symposium," Lisbon, Portugal, April 7-11, 1986.

Hancock, Trevor. Sustaining Health: Achieving Health for All in a Secure Environment. Toronto: Faculty of Environmental Studies, York University, April 1989.

Healthy Toronto 2000 Subcommittee. Healthy Toronto 2000: A Strategy for a Healthier City. City of Toronto Board of Health, September 1988.

Healthy Toronto 2000 Subcommittee. Report of the Healthy Toronto 2000 Subcommittee. City of Toronto Board of Health, September 1988.

Holtz, Susan. "Environment-Economy Integration." Canadian Business Review (Summer 1989), p. 25-28.

Hough, Michael. City Form and Natural Process. London: Van Nostrand Reinhold, 1984.

Hough, Michael, and Barrett, Suzanne. People and City Landscapes. Conservation Council of Ontario, 1987.

International Union for Conservation of Nature and Natural Resources. World Conservation Strategy. Gland, Switz.: IUCN, 1980.

Israelson, David. "Observers Gasp at Toughness of Exhaust Rules," The Toronto Star. October 29, 1989.

Kanter, Ron. Options for a Greater Toronto Area Greenlands Strategy. Government of Ontario, 1990.

Keating, Michael. Towards a Common Future: A Report on Sustainable Development and Its Implications for Canada. Environment Canada, 1989.

Lane, Barbara J. Canadian Healthy Communities Project: A Conceptual Model for Winnipeg. Winnipeg: University of Winnipeg Institute of Urban Studies, 1989.

Langer, Julia. "Changing Our Approach." Canadian Business Review (Summer 1989), pp. 29-31.

MacNeill, Jim, "Sustainable Growth," Policy Options Politiques (March 1988), pp. 22-25.

Manning, Edward. "Conservation Strategies: Providing the Vision for Sustainable Development." Ottawa: Environment Canada, 1989.

McHarg, Ian L. Design with Nature. New York: Garden City, 1969.

Metropolitan Toronto and Region Conservation Authority. "A Framework for Ecosystem Planning: An Innovative Approach to Watershed Management." Toronto, August 1990.

Meadows, Donella et al. Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind. New York: Universe Books, 1972.

Morphet, Janice. "Urban Green Space - An Issue for the 1990s." Town and Country Planning 59 (July/August 1990), pp. 198-199.

Moughtin, J.C. and A.R.T. Gardner. "Towards an Improved and Protected Environment." The Planner, June 8, 1990.

National Task Force on Environment and Economy. Report of the National Task Force on Environment and Economy. Ottawa, 1987.

Ontario Ministry of Energy, Global Warming: Towards a Strategy for Ontario. Toronto, 1990.

Ontario Ministry of Environment, Countdown: Acid Rain. Toronto, 1987.

Peli, David; Wismer, Susan. "Social Implications of a Sustainable City." Department of Community Services, Metropolitan Toronto. September, 1990.

Pollution Probe; Toyner, Warner; Moss, Glenys, The Canadian Green Consumer Guide. Toronto: McClelland and Stewart, 1988.

Rees, William. "Defining 'Sustainable Development'." CHS Research Bulletin. University of British Columbia Centre for Human Settlements, May 1989.

Richardson, Nigel. "Land Use Planning and Sustainable Development in Canada." Ontario Planning Journal 4:3 (July/August 1989), pp. 5-6.

Richardson, Nigel. Land Use Planning and Sustainable Development in Canada. Canadian Environmental Advisory Council, 1989.

Richardson, Nigel "Regional Overview Paper: Canada." Conference on Human Settlements and Sustainable Development. Toronto, June 21-23, 1990.

Robinson, John. "Exploring a Sustainable Future for Canada: the Next Step in the Conserver Society Discussion." Paper for the Leaders of National 21st Century Studies, Washington, 1989.

Robinson, John et al. "Defining a Sustainable Society: Values, Principles and Definitions." Alternatives 17:2 (1990).

Royal Commission on the Future of the Toronto Waterfront. A Green Strategy for the Greater Toronto Waterfront. Report no. 8. Toronto, 1990.

Royal Commission on the Future of the Toronto Waterfront, Waterfront Transportation in the Context of Regional Transportation. Report no. 9. Toronto, 1990.

Royal Commission on the Future of the Toronto Waterfront, Environment and Health. Report no. 1. Toronto, 1989.

Royal Commission on the Future of the Toronto Waterfront. Environment in Transition. Report no.10. Toronto, 1990.

Sadler, Barry. "Sustainable Development and Water Resource Management." Alternatives 17:3 (November/December 1990), pp.14-24.

Science Council of Canada. Canada as a Conserver Society: Resource Uncertainties and the Need for New Technologies. Ottawa: Science Council of Canada, 1977.

Silverman, Saul N. "Internationalizing the Environment." Canadian Business Review (Summer 1989), pp. 32-34.

Smith, Desmond. "Local Area Conservation: How One Suburban Municipality Utilizes Environmental Planning to Conserve its Natural Heritage." Plan Canada (September 1989).

Smith, Adrian. "Energy and the Urban Environment." The Planner, May 18, 1990.

Solway, Jeff. "Reflections on Planning for Sustainability." Canadian Institute of Planners, 1990.

"The Big Fix." Globe and Mail Toronto Magazine (November 1989), pp. 40+.

Titus, James G. "Strategies for Adapting to the Greenhouse Effect." APA Journal (Summer 1990), pp. 311-323.

World Commission on Environment and Development. Our Common Future. Oxford: Oxford University Press, 1987.